

January 11, 1949.

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Dear Francis:

When I got back to Madison, I kicked myself for having forgotten to ask you about the discontinuous distribution of mutants in h- cultures, that you mentioned at Shelter Island. If not too much trouble, could you tell me whether you have anything new about this exciting finding?

Since getting back, I've received a culture from Cavalli that he reported crosses with K-12. Like him, I'm having a very difficult job running down its nutritional requirements, which seem to be for some balanced amino acid combination, including at least methionine, threonine, histidine, isoleucine and valine (but yeast extract is very much better). Anyhow, there is no question that it does cross with K-12, lots of recombinations of unselected markers having been found among prototrophs, and in addition, at least one hybrid diploid. But except for the nutrition, this culture (from the British TCC) is very similar to K-12 (i.e., fermentations and phage responses), and in fact turns out to be the only other coli strain so far ~~tested~~ tested that is sensitive to lambda (K-12's lysogenic phage). So perhaps it is only a "reisolation" of K-12. But if so, this must be a reasonably common variety of Coli. On the other hand, this raises the knotty question of what we mean if we say a coli strain different from K-12, since it is reasonably likely that the species is monophyletic, and that different isolates differ primarily by a finite number of mutational differences. All this by way of answering the important question, do any strains other than K-12 recombine?

Margaret Lieb more or less casually asked about doing some postdoctoral fellowship work here. I couldn't encourage her, because all of our space is committed, but conceivably something might break. What would you think of the idea?

Sincerely,

Joshua Lederberg

P.S. Just got a letter from Harriett. I was a little surprised to find that she doesn't like sex in coli at all, but perhaps she was just a little provoked by some questions I'd asked about her last paper in J. Exp. Med. last year.

JL